

**BIOLOGICAL CONSTRAINTS ANALYSIS
FOR THE
SEAL BEACH PROJECT SITE**

Prepared for:

RBF CONSULTING
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Irvine, CA 92618

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SEPTEMBER 2011

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CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

A handwritten signature in black ink, appearing to read "Paul Galvin", is written over a horizontal line.

HARMSWORTH ASSOCIATES
Paul Galvin, M.S.
Vice President

SEPTEMBER 2011

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
2.0 METHODS	4
2.1 <i>Biological Resources Information sources</i>	4
2.2 <i>Vegetation mapping, habitat assessment for special status plant species and general botanical surveys</i>	4
2.3 <i>Wildlife surveys and habitat assessment for special status wildlife</i>	5
3.0 RESULTS.....	6
3.1 <i>Soils.....</i>	6
3.2 <i>Vegetation communities</i>	7
3.3 <i>Plant Inventory.....</i>	8
3.4 <i>Special Status Plant Species</i>	8
3.5 <i>Wildlife overview</i>	10
3.6 <i>Special status wildlife species.....</i>	10
3.7 <i>Wildlife movement corridors and linkages</i>	14
4.0 BIOLOGICAL CONSTRAINTS.....	15
4.1 <i>List of the potential biological constraints at the Seal Beach project site.....</i>	16
4.2 <i>Recommendations</i>	16
4.3 <i>Permits and consultations likely required</i>	17
5.0 REFERENCES.....	18
6.0 APPENDICES	22
6.1 <i>Appendix A: Average weather conditions, closest station to project site.....</i>	22
6.2 <i>Appendix B: Plant species detected at the Seal Beach project site, 2011.</i>	23
6.3 <i>Appendix C: California Native Plant Society Categories.....</i>	25
6.4 <i>Appendix D: Wildlife species detected at the Seal Beach project site, 2011....</i>	26
6.5 <i>Appendix E: Seal Beach site photographs 2011.....</i>	27

LIST OF FIGURES

FIGURE 1: LOCATION OF THE SEAL BEACH PROJECT SITE IN ORANGE COUNTY, SOUTHERN CALIFORNIA.....	2
FIGURE 2: SEAL BEACH PROJECT SITE.....	3
FIGURE 3: SOILS AT THE SEAL BEACH PROJECT SITES.	6
FIGURE 4: VEGETATION MAP OF SEAL BEACH PROJECT SITE.....	9

LIST OF TABLES

TABLE 1: VEGETATION COMMUNITIES AT THE SEAL BEACH PROJECT SITE.	8
TABLE 2: SPECIAL STATUS PLANT SPECIES HAVE THE POTENTIAL TO OCCUR IN THE SEAL BEACH CLUB PROJECT SITE:	11
TABLE 3: SPECIAL STATUS WILDLIFE SPECIES THAT OCCURRED OR HAVE THE POTENTIAL TO OCCUR IN THE SEAL BEACH PROJECT SITE.	13

1.0 INTRODUCTION

The Seal Beach project site is located in the City of Seal Beach, situated in the northwestern corner of Orange County, California. The site is located east of and adjacent to the San Gabriel River, south of Marina Drive, mostly west of 1st Street and north of the parking lot for the beach access. A small portion of the site occurs on the east side of 1st Street. The site is within the U.S. Geological Survey (USGS) topographic map: Seal Beach quadrangle (Figures 1 and 2).

The site was previously owned by the Los Angeles Department of Water and Power (DWP) and was used for power plant facilities and operations. The currently proposed project involves residential development over approximately at the northern end of the project site and open space parks and recreation in the Southern end of the site.

A site assessment and biological surveys were conducted at the site at the request of RBF Consultants. The assessment and surveys were conducted in spring 2011 and consisted of;

- a general biological assessment,
- general plant and wildlife surveys,
- habitat assessment for assessing potential for special status plant species¹, and,
- habitat assessment for assessing potential for special status wildlife species².

Focused surveys for threatened, endangered and special status plant or wildlife species were not conducted as part of this assessment.

The project site has been vacant for several years and has been significantly impacted due to frequent disking and off-road vehicle use by dirt bikes. The site is adjacent to the beach and the channilized San Gabriel River. Surrounding land uses includes multi-family residential; the Marina Community Park, a public beach, the San Gabriel River and associated bike trail. Site topography is flat and the elevation is approximately 3ft. There were no ephemeral drainages or standing water on site.

The area has a Mediterranean type climate, with hot dry summers and cool relatively wet winters. Early morning coastal fog frequently clouds the area in spring and early summer. Annual precipitation for the region averages 11.1 inches, and average annual temperature ranges from 55⁰ to 68⁰ F.

¹ Special status plant species = federal or state listed threatened or endangered species, or proposed endangered, threatened or candidate species, California Native Plant Society Species List (CNPS list 1-4), or otherwise sensitive species.

² Special status wildlife species = federal or state listed threatened or endangered species, or proposed endangered, threatened or candidate species, or otherwise sensitive species.

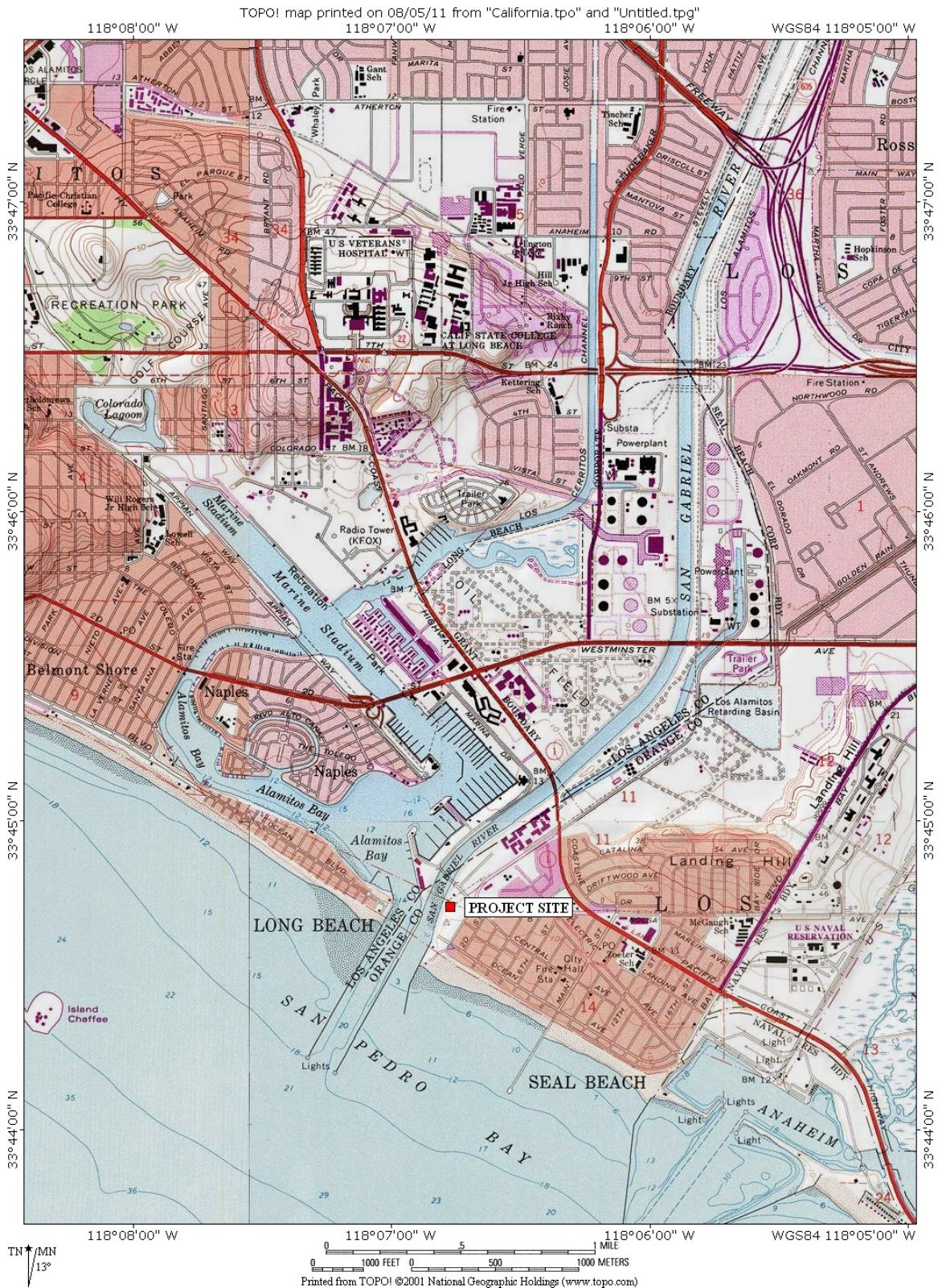


Figure 1: Location of the Seal Beach project site in Orange County, southern California.
Source: USGS Topographical quadrant: Seal Beach.



Figure 2: Seal Beach project site, in red. Source: Google Earth, Inc.

2.0 METHODS

2.1 Biological Resources Information sources

In addition to the site visit, field surveys, vegetation mapping, wildlife inventories, and habitat assessments information on the biological resources of the project site was obtained by reviewing existing available data. Databases such as the California Natural Diversity Database (CNDDDB 2011) and California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001) were reviewed regarding the potential occurrence of any special status species or sensitive habitat within or in close proximity of the project site.

The resources used in this thorough archival review included the following;

- California Natural Diversity Data Base (CNDDDB) for the USGS 7.5' quadrangle which comprised the study area: Seal Beach and neighboring quads for pertinent data,
- California Native Plant Society Inventory of rare and endangered vascular plants of California (Tibor 2001; 6th Edition of CNPS Inventory, CNPS 2011),
- Special Animals (including California Species of Special Concern), CDFG, Natural Heritage Division, February 2011,
- Special Vascular Plants, Bryophytes, and Lichens List, CDFG, Natural Heritage Division, July 2011,
- State and Federally Listed Endangered, Threatened and Rare Plants of California, CDFG, Natural Heritage Division, July 2011,
- State and Federally Listed Endangered and Threatened Animals of California, CDFG, Natural Heritage Division, February 2011,
- Review of previous biological assessment reports and species lists for the region and neighboring areas,
- Published literature (Sibley 2000, Small 1994, Moyle *et al.* 1995, Jennings and Hayes 1994, Stebbins 1985, Webster *et al.* 1980, Burt and Grossenheider 1976).

2.2 Vegetation mapping, habitat assessment for special status plant species and general botanical surveys

A floristic survey, vegetation mapping and habitat assessment was conducted on 3 May 2011, by Tara Schoenwetter. Floristic surveys were conducted to ensure the survey area was completely covered and consisted of systematic meandering transects across the entire project area at a distance that ensured complete visual coverage of the area. Each species encountered was identified to a taxonomic level necessary to determine if it was a species of interest (i.e., special status, native or non-native or invasive plant species).

Vegetation types within the project site were mapped according to the state-wide Holland classification system (Holland 1986). This system is roughly equivalent to mapping at the association level and consists of using the common name of the two most common species in the designation along with the vegetation type. Identification and mapping of vegetation also incorporated habitat descriptions provided by the more recent Manual of California Vegetation (Sawyer *et al.* 2009).

The habitat assessment for special status plant species was conducted concurrently with the vegetation mapping, and concentrated on habitats with the highest potential for yielding special status species, although all areas of the project site were checked. Each habitat within the study area was traversed on foot, examining the areas for particular features such as seeps, unique geologic types, exposures, etc., that would indicate the presence of a preferred habitat for special status plant species.

Field notes recorded included the date, location, habitat characteristics, associated plant composition and other information pertinent to the CNDDDB field survey data form. A general plant species list was compiled concurrently with the focused surveys (Appendix B). Scientific nomenclature in Hickman (1993) was used as the taxonomic resource; common names according to Roberts (1998), although several resources were consulted to identify plant species including CalFlora (2011) and CalPhotos (2011).

2.3 Wildlife surveys and habitat assessment for special status wildlife

Field surveys for wildlife and habitat assessment for special status wildlife species were conducted on 3 May and 2 June 2011 by Paul Galvin. All portions of the site were traversed on foot to survey each vegetation community, look for evidence of wildlife presence and conduct an assessment of potential habitat for special status species. Wildlife species were detected during the field surveys by sight, vocalizations, burrows, tracks, scat, scrapings and other sign. No specialized techniques, such as trapping, mist nets or taped calls, were used during the surveys.

Latin and common names of wildlife referred to in this report follow Powell and Hogue (1979), Hogue 1993 and NatureServe (<http://www.natureserve.org/explorer/>) for invertebrates; NatureServe for fish; North American Herpetology (<http://www.naherpetology.org/nameslist>) for amphibians and reptiles; American Ornithologists' Union Checklist of North American Birds - 7th Edition (2005) for birds; Baker *et al.* 2003 for mammals; and Grenfell *et al.* 2003, California Department of Fish and Game & California Interagency Wildlife Task Group (http://www.dfg.ca.gov/whdab/pdfs/species_list.pdf) and Perrins *et al.* 1983 for common names.

3.0 RESULTS

3.1 Soils

The soils on the project site are loams from the Bolsa and Marina series (NRCS Soil Survey 2011) and beach. Bolsa soils are deep, somewhat poorly drained soils formed in mixed alluvium and occur in flood plains and basins. Marina soils are well drained and occur near the ocean. Bolsa soils covered the largest portion of the site (Figure 3).

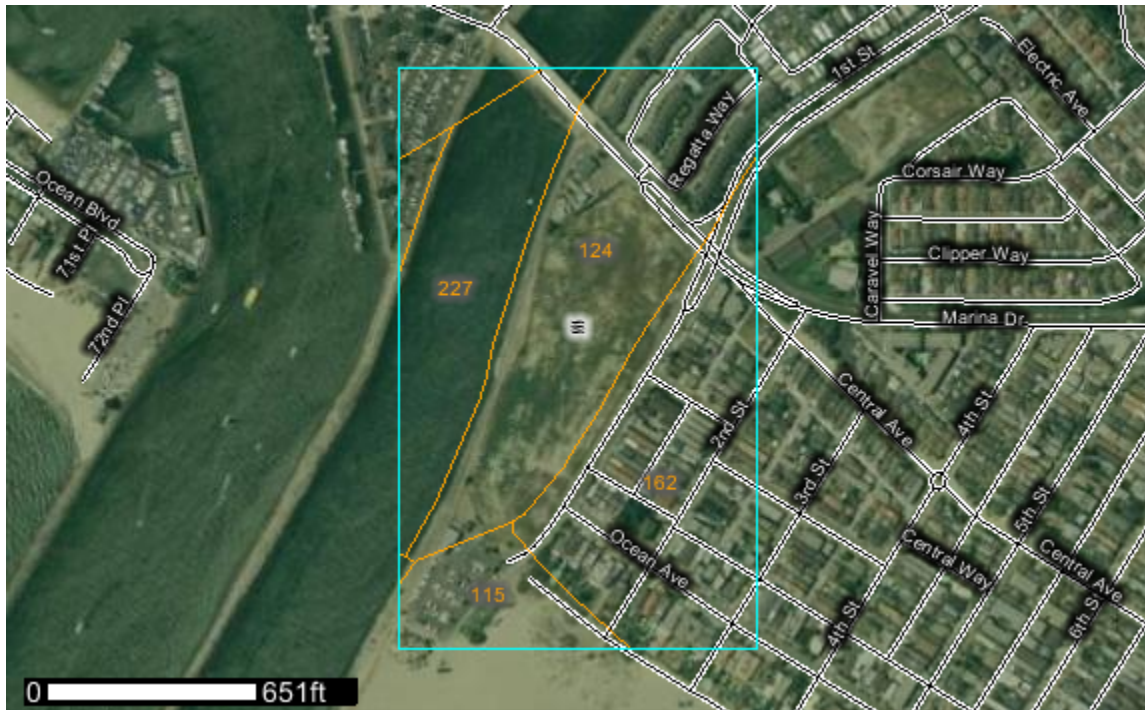


Figure 3: Soils at the Seal Beach project sites. Source: NRCS Soil Survey 2011. Bolsa silty clay loam (124); Marina loamy sand, 2 to 9 percent slopes (162); Beach (115).

The soil types that occur at the Seal Beach site are as follows;

Bolsa silty clay loam (124)

This soil consists of deep, somewhat poorly drained soils that formed in mixed alluvium. It occurs in flood plains and basins and on flat land. Surface soils are light brownish-gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) when moist. Used for urban, growing irrigated truck crops, lima beans and dryland barley. Vegetation in uncultivated areas is annual grasses and forbs.

Marina loamy sand, 2 to 9 percent slopes (162)

This soil consists of somewhat excessively well drained soil that formed in old sand dunes near the coast. Marina soils are gently sloping to moderately steep and are on short rolling dune-like slopes at elevations of 100 to 700 feet, near the coast. Surface soils are grayish brown (10YR 5/2) light loamy sand, dark brown (10YR 4/3) moist and brown (7.5YR 5/4) light loamy sand, dark brown (7.5YR 4/4) moist. Used mostly for range. Some areas used for irrigated alfalfa and special crops. Vegetation is chamise, flattop buckwheat, black sagebrush, small live oak trees, annual grasses, and forbs.

Beach (115)

Pure ocean sand at the upper edge of the beach.

3.2 Vegetation communities

The Seal Beach project site has been significantly impacted by current land use. Off road vehicle use and continual disking of the site has resulted in a disturbed community. This disturbance regime has prevented shrubs or trees from establishing on site (Photographs 1 - 6). The Seal Beach project site contains one vegetation community, non-native grasslands and also an area of exotic landscaping. The distribution of vegetation communities is shown in Figure 4, and detailed below (Table 1).

Non-Native Grasslands

This vegetation community is equivalent to Semi-Natural Herbaceous Stands under Sawyer *et al.* 2009. Non-native grassland areas were dominated by European annual grasses, with a large component of ruderal forbs. Non-native grasslands are usually associated with wastelands, areas of historic grazing and off-road recreational vehicle use. Soils are generally fine textured, often clay, moist to wet in winter and dry in summer.

At the Seal Beach project site, non-native grasslands occurred throughout the main portion of the site; where the vegetation was dominated by wild oats (*Avena fatua*) and wild rye (*Lolium perenne*), with red brome (*Bromus madritensis*), soft chess (*Bromus hordeaceus*) and ripgut grass (*Bromus diandrus*) present throughout the site. There was no significant cover of natives.

At the southeastern corner, across the road from 1st Street, the non-native grassland occurred directly over beach sand and was dominated by Bermuda grass (*Cynodon dactylon*), with telegraph weed (*Heterotheca grandiflora*) and oats also present.

A total of 9.3-acres of non-native grassland occurred onsite (Table 1; Exhibit 3).

Exotic landscaping

This land cover type is not a vegetation community since all species were planted, maintained and generally required artificial watering to survive. Exotic landscaping occurred at the southeastern corner, across the road from 1st Street, adjacent a residential

property. At its northern extent the exotic vegetation included a variety of palms and medium sized non-native trees; at the south end towards the beach, the exotic vegetation consisted of ice plant (*Mesembryanthemum nodiflorum*) and some non-native grasses.

A total of 0.2-acres of exotic landscaping occurred onsite (Table 1; Exhibit 3).

Table 1: Vegetation communities at the Seal Beach project site.

Vegetation communities	AREA (ACRES)
Non-native Grassland	9.3
Exotic landscaping	0.2
Project site total	9.5

3.3 Plant Inventory

Plant species at the Seal Beach project site consisted of species associated with non-native grassland and disturbed habitats. A total of 32 vascular plant species, representing 13 families were detected at the project site during the current surveys (Appendix B). About 16% (5) were native and the remaining 27 species were exotic. The best represented families were Asteraceae (7 species) and Poaceae (11 species).

Exotic invasive species (CalIPC 2011) documented onsite included garland chrysanthemum (*Chrysanthemum coronarium*) and giant reed (*Arundo donax*).

3.4 Special Status Plant Species

Based on a review of CNDDB, the CNPS Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001, CNPS 2011), the site assessments and field surveys, a number of special status species were identified as having some potential to occur onsite (Table 2). However, due to the regular site disking, historic disturbance and the absence of suitable habitat surrounding the project site, all these species are considered unlikely to occur onsite. In addition, there are no site records for any of these species and none were detected onsite during the current surveys.



Figure 4

3.5 Wildlife overview

Wildlife species at the Seal Beach project site consisted of species associated with non-native grassland and disturbed habitats. Wildlife diversity was very low, only 11 vertebrate species were detected, 10 birds and 1 mammal (Appendix D). Bird species observed during the survey included rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*) and house sparrow (*Passer domesticus*).

The entire site is fenced and that may limit access for wildlife but more importantly the surrounding areas are developed or marine environments. Other than coyote tracks, no burrows, tracks or signs of wildlife were detected onsite. Marine birds such as double-crested cormorants (*Phalacrocorax auritus*) and brown pelicans (*Pelecanus occidentalis*) were observed flying over the site but did not land onsite.

3.6 Special status wildlife species

Based on a review of CNDDDB, literature reviews, field surveys and assessments a number of special status wildlife species were identified as having some potential to occur within the project vicinity (Table 3). However, due to the regular site disking, historic disturbance and the absence of suitable habitat surrounding the project site, these species are considered unlikely to occur onsite. In addition, there are no site records for any of these species and none were detected onsite during the current surveys.

Table 2: Special status plant species have the potential to occur in the Seal Beach Club project site: Definitions - status: Fed = federal, FE = federal endangered, FT = federal threatened, FPE = federally proposed for listing as endangered, FPT = federally proposed for listing as threatened, FC = federal candidate species, FSC = federal special concern species, state = state of California, SE = state endangered, ST = state threatened, SCE = state candidate for listing as endangered, SCT = state candidate for listing as threatened, SC = state species of concern, FP = fully protected species, none = no federal or state listing, see Appendix C for CNPS Status. Occurrence onsite: Occurs = known to occur onsite, potential = could occur due to presence of suitable habitat onsite but not detected during current survey, unlikely = probably does not occur due to limited suitable habitat onsite and not detected.

Scientific Name FAMILY	Common name	Status	Occurrence onsite	Comments/Habitat
<i>Atriplex coulteri</i> CHENOPODIACEAE	Coulter's saltbush	Fed: None State: None CNPS: 1B.2	Unlikely, not detected during survey	Perennial herb that occurs in coastal strand, valley Grassland and coastal sage scrub communities in dune habitats. Blooms March-October.
<i>Atriplex pacifica</i> CHENOPODIACEAE	South Coast Saltbush	Fed: None State: None CNPS: 1B.2	Unlikely, not detected during survey	Annual herb found in Los Angeles to San Bernardino. Occurs in alkaline areas on sea cliffs and in coastal sage scrub. Blooms from March through October.
<i>Atriplex parishii</i> CHENOPODIACEAE	Parish's brittle scale	Fed: none State: none CNPS 1B.1	Unlikely, not detected during survey	Alkali vernal pools, alkali annual grassland, alkali playa and alkali scrub. Traver, domino and willows soils. Blooms from June through October.
<i>Atriplex serenana</i> var. <i>davidsonii</i> CHENOPODIACEAE	Davidson's salt scale	Fed: None State: None CNPS: 1B.2	Unlikely, not detected during survey	Annual herb that occurs in coastal Sage Scrub, wetland-riparian habitats along the coast. Blooms June-October.
<i>Calandrinia maritima</i> PORTULACACCEAE	Seaside Calandrinia	Fed: None State: None CNPS: none	Unlikely, not detected during survey	Annual herb found in coastal southern California. Occurs in sandy places, sea bluffs, coastal sage scrub. Blooms from March through May.
<i>Centromadia parryi</i> ssp. <i>australis</i> ASTERACEAE	southern tarplant	Fed: None State: None CNPS: 1B.1	Unlikely, not detected during survey	Annual herb known to occur in coastal regions from San Diego to Santa Barbara. Occurs in marshes and swamps, in valley and foothill grasslands and in vernal pools. Blooms May-November.
<i>Centromadia pungens</i> ssp. <i>laevis</i> ASTERACEAE	Smooth Tarplant	Fed: None State: None CNPS: 1B.1	Unlikely, not detected during survey	California endemic annual herb found only in Riverside, San Diego and San Bernardino Counties. Occurs on Alkaline soils in chenopod scrub, riparian woodland, meadows and seeps, playas and valley and foothill grassland below 480 meters. Blooms from April through September.
<i>Holocarpha virgata</i> ssp. <i>elongata</i> ASTERACEAE	Graceful Tarplant	Fed: None State: None CNPS: 4.2	Unlikely, not detected during survey	Annual herb, found in San Diego. Occurs in Chaparral, Valley Grassland, Foothill Woodland, Coastal Sage Scrub Blooms from June through November.

Scientific Name FAMILY	Common name	Status	Occurrence onsite	Comments/Habitat
<i>Nemacaulis denudata</i> var. <i>denudata</i> <i>POLYGONACEAE</i>	coast woolly-heads	Fed: None State: None CNPS: 1B.2	Unlikely, not detected during survey	Annual herb occurs in coastal dunes. Blooms April through September.

Table 3: Special status wildlife species that occurred or have the potential to occur in the Seal Beach project site. Definitions - status: Fed = federal, FE = federal endangered, FT = federal threatened, FPE = federally proposed for listing as endangered, FPT = federally proposed for listing as threatened, FC = federal candidate species, FSC = federal special concern species, state = state of California, SE = state endangered, ST = state threatened, SCE = state candidate for listing as endangered, SCT = state candidate for listing as threatened, CSC = California species of special concern, FP = fully protected species, CNDDDB = species listed under the states CNDDDB program, none = no federal or state listing. Occurrence onsite: Occurs = known to occur onsite, potential = could occur due to presence of suitable habitat onsite but not detected during current survey, unlikely = probably does not occur due to limited suitable habitat onsite and not detected.

Birds					
<i>Circus cyaneus</i>	northern harrier	ESA: None CESA: None	DFG: CSC CNDDDB Ranked	Potential, non nesting only	grassland, marshes, agricultural land, open areas in scrub and chaparral; ground or shrub nesting
<i>Elanus leucurus</i>	white-tailed kite	ESA: None CESA: None	DFG: FP CNDDDB Ranked	Potential, non nesting only	forages in grasslands; nests and roosts in oak and riparian woodland
<i>Athene cunicularia</i>	burrowing owl	ESA: None CESA: None	DFG: CSC FW: BCC CNDDDB Ranked	Unlikely	grasslands, farmland and other open habitats
<i>Asio flammeus</i>	short-eared owl	ESA: None CESA: None	DFG: CSC CNDDDB Ranked	Unlikely	grasslands, open habitats
<i>Eremophila alpestris actia</i>	California horned lark	ESA: None CESA: None	DFG: WL CNDDDB Ranked	Potential	Open areas with little or no ground cover, such as grassland or ruderal vegetation
<i>Ammodramus savannarum</i>	grasshopper sparrow	ESA: None CESA: None	DFG: CSC CNDDDB Ranked	Unlikely	Grasslands
Mammals					
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	ESA: None CESA: None	DFG: CSC CNDDDB Ranked	Unlikely	coastal sage scrub, grassland and chaparral
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	ESA: None CESA: None	DFG: CSC CNDDDB Ranked	Unlikely	annual grassland and coastal sage scrub

3.7 Wildlife movement corridors and linkages

The terms “wildlife corridors” and “linkages” are based upon fundamental ecological concepts, but can be easily misinterpreted because: 1) universally accepted definitions of these terms have not been established; 2) each term can be interpreted using different time scales (i.e. daily, seasonal, annual and evolutionary) and spatial scales (i.e. microclimate, local, community, and landscape) which changes their meaning; 3) the areas and values change from species to species; and, 4) the understanding of how these processes work is on-going and conclusions are subject to revision. The following definitions are intended to provide a working understanding of corridors and linkages and are summarized from several sources (SCWP 2003, USCA9D 1990, Barrett and Livermore 1983, Beier 1993).

Wildlife corridor - Wildlife corridors are areas which animals can use to move from one patch of suitable habitat to another. These areas would be expected to have the least habitat fragmentation relative to surrounding areas. A wildlife corridor establishes connectivity for animals to move, live, reproduce and respond to functional ecological processes during the course of a year to several years. The quality and functionality of a particular wildlife corridor varies from species to species.

Wildlife crossings are generally small, narrow wildlife corridors that allow wildlife to pass through an obstacle or barrier such as a roadway to reach another patch of habitat. Wildlife crossings are manmade and include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over or under highways.

Both wildlife crossings and wildlife corridors function to prevent habitat fragmentation that would result in the loss of species that require large contiguous expanses of unbroken habitat and/or that occur in low densities.

Linkages – Linkages are areas that provide for long term movement or interaction of wildlife to maintain natural evolutionary and ecological patterns. Linkages are fundamental for gene flow and large scale ecological processes. These areas are usually defined by the zones of “least resistance” for the genes of a given species to move or “flow” between core reserve populations.

No wildlife corridors or linkages are known at the Seal Beach project site. The surrounding area is developed and provide little opportunity for wildlife movement to or from the project site.

4.0 BIOLOGICAL CONSTRAINTS

There are few potential biological constraints at Seal Beach project site. Any significant impacts to biological constraints that would result from the proposed project would require appropriate mitigation.

Significance of impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in California Environmental Quality Act (CEQA), Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established the following policy of the State of California:

Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to the CEQA Guidelines, (Section 15064.7, Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA Guidelines provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..

Therefore, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project;

Appendix G of the 2004 State CEQA Guidelines indicate that a project may be deemed to have a significant effect on the biological resources if the project is likely to:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

4.1 List of the potential biological constraints at the Seal Beach project site

- 1. Sensitive wildlife species;
 - a. Nesting birds.

Any areas subject to the U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) jurisdiction under the 404 and 1600 programs, would also be a constraint, but that is the subject of a separate report.

4.2 Recommendations

No additional surveys or site assessments are not recommended.

4.3 Permits and consultations likely required

Any proposed project at the Seal Beach project would require the following permits/consultations/co-ordination;

California Environmental Quality Act (CEQA) CEQA Document

Federal Migratory Bird Treaty Act of 1918 (MBTA)

The MBTA governs the taking and killing of migratory birds, their eggs, parts, and nests and prohibits the take of any migratory bird, their eggs, parts, and nests. No take of migratory birds is allowed under this act. Construction work must comply with the MBTA.

5.0 REFERENCES

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6.0 APPENDICES

6.1 Appendix A: Average weather conditions, closest station to project site.

NEWPORT BEACH HARBOR, CALIFORNIA (046175)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1921 to 12/31/2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	63.2	63.4	64.0	65.2	67.1	69.1	72.3	73.4	73.0	70.9	67.9	64.3	67.8
Average Min. Temperature (F)	46.9	48.2	49.8	52.3	56.0	59.1	62.2	63.2	61.2	57.2	51.4	47.5	54.6
Average Total Precipitation (in.)	2.21	2.34	1.75	0.93	0.23	0.07	0.01	0.06	0.22	0.38	1.08	1.86	11.12
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Max. Temp.: 98.2% Min. Temp.: 98.2% Precipitation: 98.4% Snowfall: 93.6% Snow Depth: 93.6%

Check Station Metadata or Metadata graphics for more detail about data completeness.

6.2 Appendix B: Plant species detected at the Seal Beach project site, 2011. Does not include the exotic non-native planted trees and palms in the landscaped area.

SCIENTIFIC NAME	COMMON NAME
ANGIOSPERMAE	FLOWERING PLANTS
ANGIOSPERMS - DICOTYLEDONES	DICOTS
AIZOACEAE	CARPET-WEED FAMILY
<i>Mesembryanthemum nodiflorum</i> *	Small-Flowered Ice Plant
ARALIACEAE	GINSENG FAMILY
<i>Hedera helix</i> *	English Ivy
ASTERACEAE	SUNFLOWER FAMILY
<i>Centaurea melitensis</i> *	Tocalote
<i>Chrysanthemum coronarium</i> *	Garland Chrysanthemum
<i>Conyza canadensis</i>	Common Horseweed
<i>Heterotheca grandiflora</i>	Telegraph Weed
<i>Lactuca serriola</i> *	Prickly or Wild Lettuce
<i>Pluchea sericea</i>	Desert Arrowweed
<i>Sonchus asper subsp. asper</i> *	Prickly Sow Thistle
BORAGINACEAE	BORAGE FAMILY
<i>Heliotropium curassavicum</i>	Salt or Alkali Heliotrope
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i> *	Black Mustard
<i>Raphanus sativus</i> *	Wild Radish
<i>Sisymbrium irio</i> *	London Rocket
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera japonica</i> *	Japanese Honeysuckle
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Atriplex semibaccata</i> *	Australian Saltbush
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Convolvulus arvensis</i> *	Field Bindweed
FABACEAE	LEGUME FAMILY
<i>Melilotus indicus</i> *	Yellow Sweet-Clover
<i>Trifolium albopurpureum</i>	Rancheria Clover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	Red-Stemmed Filaree
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	Cheeseweed
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Rumex crispus</i> *	Curly Dock
ANGIOSPERMS - MONOCOTYLEDONES	MONOCOTS
POACEAE	GRASS FAMILY
<i>Arundo donax</i> *	Giant Reed
<i>Avena fatua</i> *	Wild Oat
<i>Bromus diandrus</i> *	Common Ripgut Grass
<i>Bromus hordeaceus</i> *	Soft Chess
<i>Bromus madritensis subsp. rubens</i> *	Foxtail Chess or Red Brome
<i>Cynodon dactylon</i> *	Bermuda Grass
<i>Hordeum vulgare</i> *	Cultivated Barley

<i>Lolium perenne</i> *	English Ryegrass
<i>Parapholis incurva</i> *	European Sickle-Grass
<i>Piptatherum miliaceum</i> *	Smilo Grass or Millett Ricegrass
<i>Schismus barbatus</i> *	Mediterranean Schismus
<p>KEY: Asterisk (*) = non-native species; + = sensitive species; Sources: Taxonomy - Hickman (1993), http://ucjeps.berkeley.edu/interchange.html, November 2005; Common names and non-native species designations according to Roberts (1998), then Hickman (1993)</p>	

6.3 Appendix C: California Native Plant Society Categories

CNPS Status based on California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001):

List 1A: Plants Presumed Extinct in California

The plants of List 1A are presumed extinct because they have not been seen or collected in the wild for many years. Although most of them are restricted to California, a few are found in other states as well. There is a difference between "extinct" and "extirpated." A plant is extirpated if it has been locally eliminated. It may be doing quite nicely elsewhere in its range. All of the plants constituting List 1A meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

List 1B: Plants Rare, Threatened or Endangered in California and Elsewhere

The plants of List 1B are rare throughout their range. All but a few are endemic to California. All of them are judged to be vulnerable under present circumstances or to have a high potential for becoming so because of their limited or vulnerable habitat, their low numbers of individuals per population (even though they may be wide ranging), or their limited number of populations. All of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

List 2: Plants Rare, Threatened or Endangered in California, But More Common Elsewhere

Except for being common beyond the boundaries of California, the plants of List 2 would have appeared on List 1B. Based on the "Native Plant Protection Act," plants are considered without regard to their distribution outside the state. All of the plants constituting List 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

List 3: Plants About Which We Need More Information—A Review List

The plants that comprise List 3 are an assemblage of taxa that have been transferred from other lists or that have been suggested for consideration. The necessary information that would assign most to a sensitivity category is missing.

List 4: Plants of Limited Distribution—A Watch List

The plants in this category are of limited distribution in California and their vulnerability or susceptibility to threat appears low at this time. While these plants cannot be called "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Many of them may be significant locally. Should the degree of endangerment or rarity of a plant change, they will be transferred to a more appropriate list.

Threat Code Extensions and their meanings:

- .1- Seriously endangered in California
- .2- Fairly endangered in California
- .3- Not very endangered in California

6.4 Appendix D: Wildlife species detected at the Seal Beach project site, 2011.

FAMILY/SPECIES NAME	COMMON NAME
COLUMBIDAE	PIGEONS & DOVES
<i>Columba livia</i>	Rock Pigeon
<i>Zenaida macroura</i>	Mourning Dove
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's Hummingbird
CORVIDAE	JAYS, MAGPIES & CROWS
<i>Corvus brachyrhynchos</i>	American Crow
HIRUNDINIDAE	SWALLOWS
<i>Hirundo rustica</i>	Barn Swallow
MIMIDAE	MOCKINGBIRDS & THRASHERS
<i>Mimus polyglottos</i>	Northern Mockingbird
STURNIDAE	STARLINGS & ALLIES
<i>Sturnus vulgaris</i>	European Starling
FRINGILLIDAE	FRINGILLINE FINCHES
<i>Carpodacus mexicanus</i>	House Finch
<i>Carduelis psaltria</i>	Lesser Goldfinch
PASSERIDAE	OLD WORLD SPARROWS
<i>Passer domesticus</i>	House Sparrow
CANIDAE	FOXES, WOLVES & RELATIVES
<i>Canis latrans</i>	Coyote

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6.5 Appendix E: Seal Beach site photographs 2011.



Photograph 1: Main area of site looking north, showing non-native grasslands, May 2011.



Photograph 2: Main area of site looking southwest, showing non-native grasslands, May 2011.



Photograph 3: Project site south of 1st Street, showing non-native grassland, June 2011.



Photograph 4: Project site south of 1st Street, showing exotic landscaping, June 2011.



Photograph 5: Main area of site looking north, after disking, June 2011.



Photograph 6: Main area of site looking west, after disking, June 2011.